

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

NEW PLANTS FROM SINALOA.

BY S. F. BLAKE.

The following new species of plants have been found in a collection from the District of San Ignacio, Sinaloa, Mexico, made by Señor Antonio E. Salazar under the direction of Señor Jesús G. Ortega, head of the Department of Agriculture, Department of Sinaloa and Nayarit. This collection has recently been sent to the U. S. Department of Agriculture for determination.

***Polygala sinaloae*, sp. nov.**

Slender annual; stems solitary, erect or ascending, sparsely branched, 1.1 to 1.6 dm. high, 5-angulate, papillose-roughened on the angles, glabrous; leaves remote, whorled to middle of stem or higher, the two lowest whorls in 2's or 3's, oval to elliptic, acute or cuspidulate, cuneate at base, 6 to 12 mm. long including the short petiole; one or two median whorls in 5's, the blades elliptic-linear, acuminate at each end, cuspidulate, glabrous, papillose-roughened on margin, subsessile, 1 to 1.8 cm. long, 1.5 to 2.5 mm. wide; those of the branchlets mostly scattered, linear, subulate-tipped, 4 to 8 mm. long; peduncles 1 to 2 cm. long; racemes cylindric or conic, acute, rather loosely flowered, 5 mm. thick, the axis becoming 1 to 2.5 cm. long; bracts ovate, attenuate-tipped, deciduous, 1 mm. long; pedicels 0.8 mm. long; flowers magenta-pink; upper sepal broadly oval, obtusely apiculate, 1-nerved, sparsely stipitate-glandular-ciliate, 1 to 1.2 mm. long; lower sepals ovate, acute or acuminate, sparsely stipitate-glandular-ciliate, 0.8 to 1 mm. long; wings obovate, rounded at apex, 3-nerved, 2.8 mm. long, 1.4 mm. wide; keel 2 mm. long, the crest of 4 pairs of lobes, the uppermost short, adnate, emarginate, the 3 lower linear, papillose; upper petals oblong-ovate, truncate, 4-veined, 2.2 mm. long; capsule oval, obtuse, 1.7 mm. long, 1.4 mm. wide; seed ellipsoid, pubescent, 1.6 mm. long; aril 1 mm. long, the two lobes oblong.

Type in the U. S. National Herbarium, no. 1,011,733, collected in damp places at an altitude of 950 meters, Quebrada de la Mojonera, San Ignacio, Sinaloa, Mexico, February 19, 1919, by A. E. Salazar (no. 782).

Most closely related to *P. asperuloides* H. B. K., of Guatemala and British Honduras, from which it differs in its larger magenta-pink flowers and longer pedicels.

***Parsonsia blepharophylla*, sp. nov.**

Herbaceous, 3.5 dm. high or more; stem slender, terete, grayish, densely hispidulous with slightly retrorse hairs, the divergent branches also sparsely hispid with ascending brownish hairs; leaves opposite, the blades 2.2 to 4.5 cm. long, 1 to 1.3 cm. wide, lanceolate to lance-ovate, acuminate, rounded or subcordate and usually unequal at base, firm, entire, feather-veined with 6 to 8 pairs of prominulous lateral veins, above pale green, tuberculate-hispidulous with spreading hairs and sparsely hispid with incurved tuberculate-based hairs, toward margin hispid-ciliate, beneath scarcely paler green, tuberculate-hispidulous and along nerves hispid; petioles 1 to 2 mm. long, hispidulous and sparsely hispid; branch leaves smaller; flowers in racemes of 10 to 12 toward ends of branches and stem; bracts ovate, rather crowded, 6 to 13 mm. long; pedicels densely hispidulous, 1 to 2 mm. long; calyx 25 to 28 mm. long, nearly tubular, short-calcarate (spur 1 mm. long), slightly swollen above, 12-nerved, purplish-tinged, rather densely hispid with purplish hairs and hispidulous with short white spreading hairs, glabrous within below the stamens; petals 6, deep red with purplish-black basal spot, the 2 upper oval, 11 mm. long, 8 mm. wide, the 4 lower 3 to 6 mm. long; stamens 11, inserted about $\frac{3}{4}$ the length of the calyx above the base (the 2 dorsal epipetalous slightly lower down), the episepalous ones exserted, the 2 dorsal episepalous shorter and purplish-bearded especially at apex; ovary glabrous, 16-ovulate; style glabrous, exserted; disk short, thick, bisulcate, revolute.

Type in the U. S. National Herbarium, no. 1,011,732, collected on road from Ixtagua to Agua Fría, San Ignacio, Sinaloa, Mexico, altitude 340 meters, January 20, 1919, by A. E. Salazar (no. 698).

This species belongs to series 3 of the subsection *Lophostomum* of Koehne's monograph, and is distinguished from *Cuphea bilimekii* Koehne, its nearest relative, by its densely hispidulous stem and pedicels, longer calyx, and larger petals.

***Piptothrix sinaloae*, sp. nov.**

Shrub, 0.5 to 0.8 m. high; branchlet slender, terete, fuscous-brown, rather densely incurved-pubescent with several-celled hairs; leaves opposite, the blades 5 to 5.5 cm. long, 2 to 3.2 cm. wide, ovate, acuminate, and somewhat falcate, rounded to cuneate-rounded at base, broadest in the lower third, serrate with about 11 pairs of mucronulate teeth between the entire base and apex, papyraceous, 3-nerved, prominulous-reticulate beneath, above dull green, evenly but not densely short-pubescent with spreading several-celled glandular-tuberculate-based hairs, beneath paler green, similarly short-pubescent chiefly along the veins and veinlets, densely gland-dotted; petioles 2 to 3 mm. long, similarly pubescent; panicle terminal, rounded, 4 cm. long, 5 cm. wide, densely short-pubescent with more or less spreading

glandular-based hairs; pedicels 2 mm. long or less; heads 8-flowered, slender, 4 mm. high; involucre 2 mm. high, the phyllaries about 7, somewhat unequal, linear, acutish, siccate, not distinctly nerved, gland-dotted and sparsely puberulous; corollas white, glabrous, 2.7 mm. long, with slender tube (0.8 mm. long), funnellform throat, and triangular spreading teeth; styles creamy; achenes 5-angled, whitish, sparsely puberulous, 1.3 mm. long; pappus of about 15 fragile upwardly spinulose unequal awns 0.6 to 2 mm. long.

Type in the U. S. National Herbarium, no. 1,011,731, collected in shady, sheltered places, Sierra del Mineral del Tominil, District of San Ignacio, Sinaloa, Mexico, altitude 1,500 meters, November 17, 1918, by A. E. Salazar (no. 75).

Distinguished from *P. pubens* A. Gray, the only other described species with pubescent stem and branches, by its 8-flowered (not 11-flowered) heads, and by the sparse pubescence of the lower surface of the leaves.

***Perymenium stenophyllum*, sp. nov.**

Frutescent; branches very slender, gray, quadrangular, striate, sparsely strigose and strigillose, glabrescent; leaves opposite, the blades 3 to 10 cm. long, 1 to 3.5 mm. wide, narrowly linear, acuminate at both ends, firm, revolute, 1-nerved, above dark green, strigose and strigillose with somewhat tuberculate-based hairs, beneath strigose on costa, between the costa and the margin densely canescent-tomentulose with crisped hairs; petioles strigillose, 1 to 2 mm. long; heads about 8 mm. wide, in terminal clusters of 3 to 7; pedicels slender, striate, strigillose, 3 to 20 mm. long; disk hemispheric, 4 to 5 mm. high, 4 to 6 mm. thick; involucre 4-seriate, graduated, 4 to 5 mm. high, the outermost phyllaries much smaller, ovate, obtuse, indurated, with obscurely herbaceous tip, strigillose, ciliate, the inner ones oval to oblong-oval, rounded, obscurely herbaceous-tipped, strigillose and ciliate; corollas not seen; pales acute, strigillose on keel, 4 mm. long; ray achenes trigonous, wingless, blackish, cross-striate, strigillose on the angles, 2.5 mm. long; disk achenes similar, biconvex, 2 mm. long; pappus of about 20 stoutish strigillose-ciliate deciduous awns, those on the angles 1.3 mm. long, the others subequal, 0.8 mm. long.

Type in the U. S. National Herbarium, no. 1,010,062, collected in calcareous soil, District of San Ignacio, Sinaloa, Mexico, August 20, 1918, by A. E. Salazar (no. 501).

This very distinct species is easily recognized by its narrowly linear leaves, densely canescent-tomentulous beneath.

***Verbesina ortegae*, sp. nov.**

Frutescent; branches greenish, striate, rather sparsely strigillose; leaves alternate, the blades 7 to 10 cm. long, 1.5 to 2.5 cm. wide, elliptic-lanceolate, serrulate with about 11 pairs of depressed mucronulate teeth, feather-veined (lateral veins about 9 pairs, translucent), not reticulate, membranaceous, above deep green, rather sparsely strigillose, smooth, beneath

duller green, inconspicuously and rather sparsely strigillose; petioles naked, not auriculate or decurrent, strigillose, 2 to 10 mm. long; heads 6 mm. wide, numerous in dense terminal and subterminal flattish panicles 3 to 3.5 cm. wide, these somewhat surpassing the leaves; pedicels densely ascending-puberulous, 3 to 7 mm. long; disk obovoid-oblong, 5 to 7 mm. high, 2.5 to 3.5 mm. thick; involucre 3-seriate, graduated, 3 to 3.5 mm. high, the phyllaries narrowly oblong, rounded, indurated, 3-vittate, with thinner obscurely herbaceous tip, appressed, white-ciliolate and slightly strigillose; rays about 5, yellow, quadrate, fertile, unequally tridentate, 2 mm. long and wide; disk corollas about 20, yellow, sparsely pilose on the obscure tube, 3 mm. long (tube about 0.7 mm.); pales obtuse, pubescent dorsally, ciliate above, 4.5 mm. long; disk achenes cuneate-obovate, blackish, very sparsely strigillose, 3.3 mm. long, narrowly winged below, the wings somewhat broadened above and adnate to the base of the awns; awns 2, slender, unequal, sparsely strigillose, 1.5 to 2.5 mm. long.

Type in the U. S. National Herbarium, no. 1,010,064, collected in the vicinity of San Ignacio, Sinaloa, Mexico, 1918-1919, by A. E. Salazar (no. 662).

This species belongs in the section *Saubinetia*, next to *V. abscondita* Klatt and *V. perymenioides* Sch. Bip. It is distinguished from the first by its thin, smooth, merely strigillose leaves, and from the second by its smaller panicles and by having its leaves strigillose, not loosely pilosulous, beneath. The species is named in honor of Señor Jesús Gonzales Ortega, Head of the Department of Agriculture in Sinaloa, under whose direction these collections were made.

Otopappus salazari, sp. nov.

Scandent shrub; branchlets slender, grayish, striate, strigillose; leaves opposite, the blades 9.5 to 12 cm. long, 2.5 to 4 cm. wide, lance-ovate, long-acuminate, often falcate, at base truncate-rounded, obscurely mucronulate-denticulate with scattered teeth, 3-nerved and prominulous-reticulate beneath, membranaceous, above deep green, evenly strigillose with slightly tuberculate-based hairs and slightly roughish, beneath slightly paler green, strigose along costa, elsewhere evenly but sparsely strigillose; petioles slender, unmarginated, strigillose, 7 to 11 mm. long; heads 12 to 15 mm. wide, about 13 in a terminal ternately arranged panicle 6.5 cm. wide; pedicels strigillose, 1 to 1.7 cm. long; bracts minute; disk hemispheric, 8 to 10 mm. high, 7 to 10 mm. thick; involucre 5-seriate, graduated, 4 to 4.5 mm. high, the phyllaries oval or oblong-oval, obtuse, indurated, with obscurely subherbaceous midline and slightly spreading apex, strigillose chiefly along midline, ciliate, the outermost oblong-spatulate and subherbaceous, spreading; rays about 10, oval, yellow, fertile, 4.5 mm. long; disk corollas yellow, glabrous, 4.5 to 5 mm. long (tube slender, 1.5 to 1.8 mm.); pales acute, spinulose-ciliolate on keel and margin, 6 mm. long; ray achenes trigonous, rather narrowly winged, the wings broadened above and adnate to the awns throughout their length; awns 3, the inner one 1.5 mm. long, the two outer about 0.5

mm. long, all connected at base by the lacerate corona, the latter about 0.5 mm. long; disk achenes strongly compressed, glabrous except for the spinulose-ciliolate wings, 3 mm. long, narrowly winged, the wings broadened above and adnate to the awns throughout their length; inner awn 2 mm. long, the outer 1 mm. long; squamellae about 6, united at base into a lacerate corona, 0.4 mm. long.

Type in the U. S. National Herbarium, no. 1,010,063, collected at Ixtagua, District of San Ignacio, Sinaloa, Mexico, August 12, 1918, by A. E. Salazar (no. 450).

Otopappus salazari is easily distinguished by its radiate heads, long pedicels, and evenly strigillose leaves.